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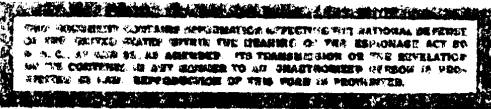
INFORMATION REPORT

REPORT

CD NO

COUNTRY East Germany

DATE DISTR 17 January 1951

SUBJECT VEB Funkwerk Koeppenick:
Echolot, Ecnograph, and Fischlupe
DevelopmentNO. OF PAGES 25X1
4PLACE
ACQUIREDNO. OF ENCLS.
(LISTED BELOW)DATE OF
INFOSUPPLEMENT TO
REPORT NO.

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1. TEN 3 is one of five laboratories in Department TEN in Development Area II (TE II) of Funkwerk Koeppenick. TEN is headed by Willy Geissler, a member of the SED. The other four laboratories are:

- a. TEN 1, engaged in the development of amplifiers, headed by department head Geissler;
- b. TEN 2, engaged in the development of modulation stages, headed by, Kurt Guelldenpfennig;
- c. TEN 4, engaged in electro-acoustic development, headed by Fritz Knochenhauer;
- d. TEN 5, called the "quartz laboratory", headed by Scheil (fnu), a returnee from the USSR.

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Construction work for all five laboratories under TEN is carried out in TCK 5, a construction office headed by, Heinrich Klein.

- 2; TEN 3 is a laboratory for hydro-acoustic development. It is headed by Eng. Harald Fessler, who is mainly engaged in the development of magnetostriction oscillators. Following is a list of the laboratory personnel with their main fields of activity:

- a. Eng. Ernst Roessler, engaged in the development of the Fischlupe device and of the Echolot device for smallest depths;
- b. Eng. Ernst Ruffert, also engaged in Fischlupe and Echolot development;
- c. Eng. Kurt Mueller, engaged in the development of small-type Fischlupe and of Ecnograph devices;
- d. Eng. Alfred Kesten, mainly engaged in Ecnograph development;

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the German administration at the end of 1953. Fun'werk Koeppenick was requested to forward all blueprints and calculations pertaining to this "Ausfahrgeraet" to one of the Soviet-operated scientific-technical offices in East Berlin. These blueprints and calculations were made by Eng. Pressler and technician Kesten. Upon orders of the East German Government, the Rundecholot development was continued after the termination of SSG administration. It is assumed that the Russians have been kept informed on its progress and will eventually receive the completed results of the development.

5. The Rundecholot operates not only for vertical depth sounding but for sounding in all directions within a semi-sphere located around the ultra-sonic transmitter. The transmitter consists of two oscillators made from 90 percent pure nickel and 0.1 millimeter strong. These oscillators are excited with a transmitter tube developed by Gueldersfennig in TBN 2. The frequency used is 35 kcs which is near the limit of audibility. It has to be so low because the device is scheduled to operate within a radius of eight kilometers. The regular Echolots, which operate only vertically over much smaller distances, use corresponding frequencies: the Echolot mentioned above with a maximum sounding distance of 1,200 meter operates with 30 kcs frequency and the Echolot for smallest depths operates with 48 kcs as a "Frequenzlot". i.e. the echo radiation releases a new transmitter impulse when it reaches the receiver. The receiver installation of the Rundecholot consists of an oscillator system similar to the one used in the transmitter and a resonance amplifier which amplifies the arriving echo radiation. The amplified impulses are made visible on a cathode ray tube.
6. By early November 1954, only the transmitting installation and the resonance amplifier for the receiving installation of the Rundecholot were completely developed and laboratory samples were made. All other parts were developed on paper only. Even so, the problem of making the echo impulses visible had not been completely solved. TBN 3 has ten nickel oscillators obtained from supplies of the former German Kriegsmarine.

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